

Chapter 8

Animation Screen

Chapter 8 Animation Screen (Animation Display of operation state of a unit)

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8.1

Animation Screen

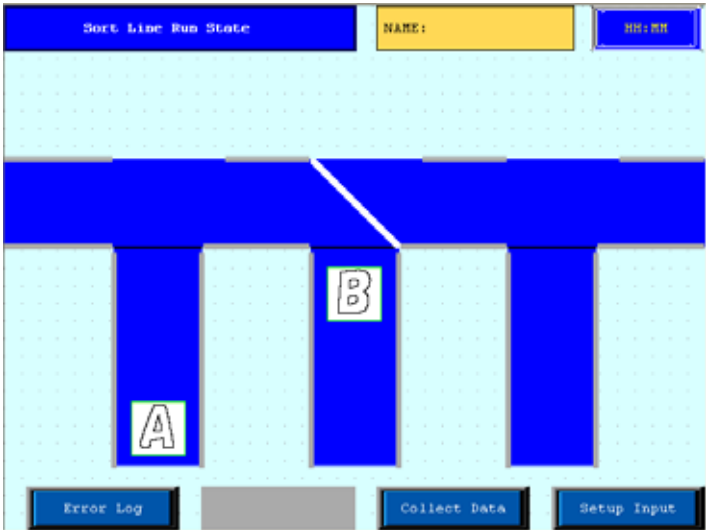
Here, it will be described what kind of screen Animation Screen is.



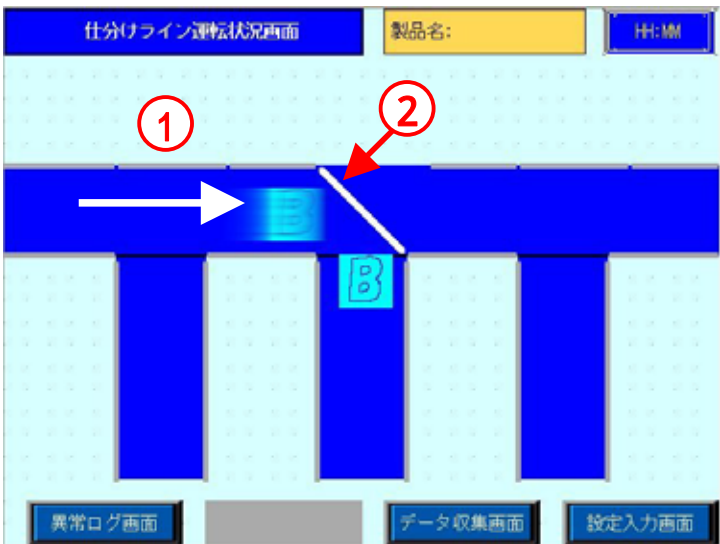
What is Animation Screen?

• What can be done?

Move of things and working state of the unit can be displayed with easy animation.
Therefore it's possible to grasp a whole state at a glance.



• About Animation Screen



Using J tag and R tag, the move of the thing is expressed.

Using L tag, Open/Close of the pusher is displayed.

8.2

Animation

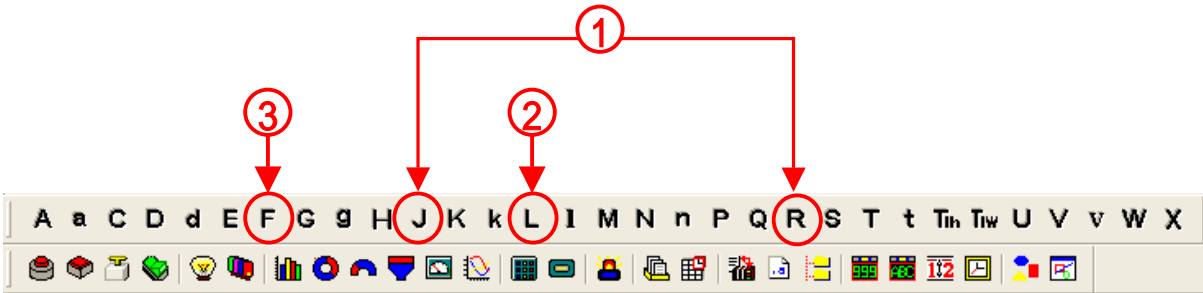
Here, use of various animation display will be described.



Various Animation Display

• Tags are used to perform Animation Function. The tags used for Animation Display are as follows;

- Each Animation Function (Selection from the tag tool bar)



J tag (Mark Move Display): Calls up a mark to the place set via R tag and displays it

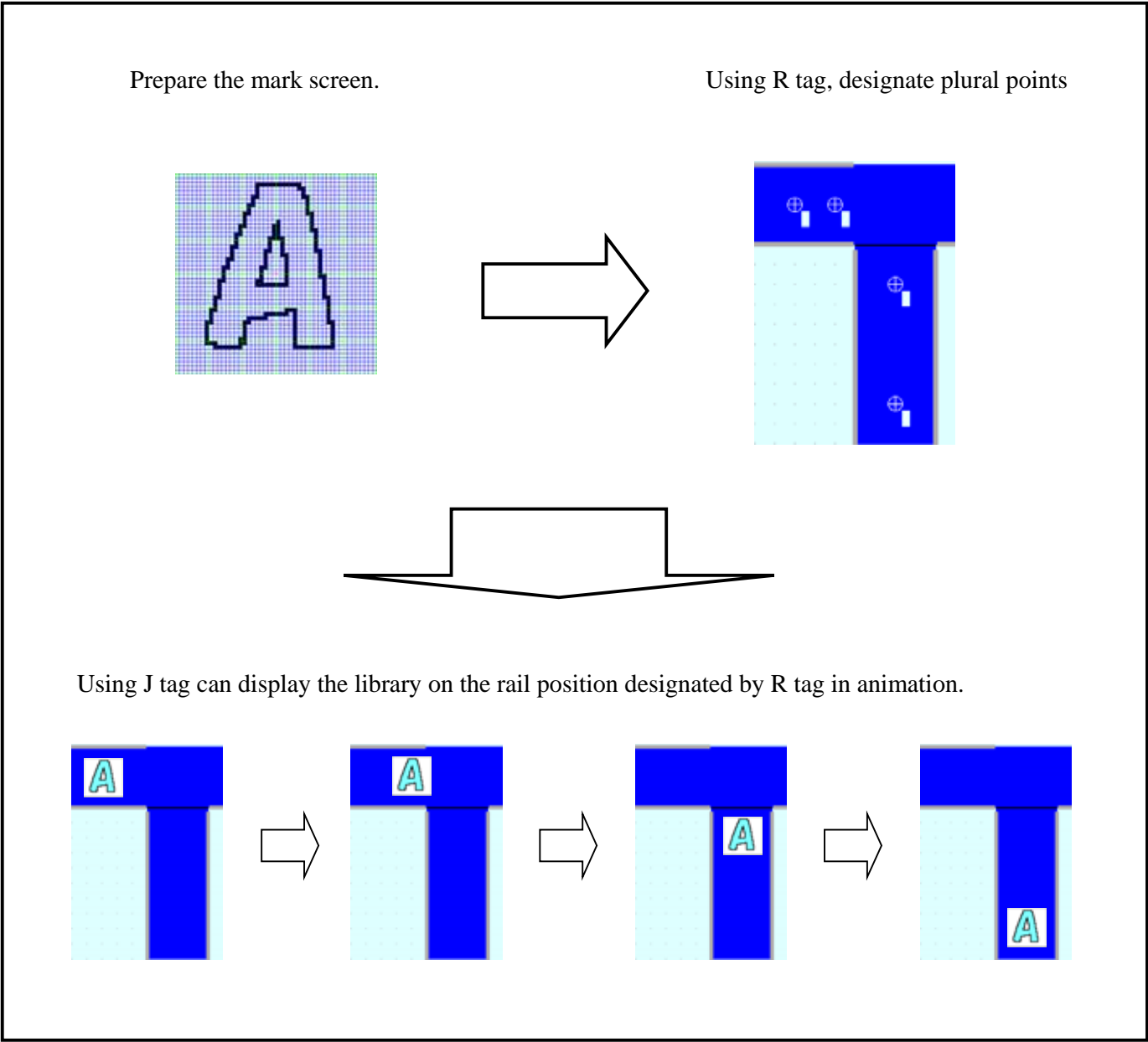
R tag (Rail Setting) : Designates plural points where a mark is displayed and shows a rail of move.

L tag (Library Display) : Calls a picture of another screen to the running screen and displays it.

F tag (Free Library Display): Calls up a picture of a screen to an optional position on the running screen and displays it

1. Actions of J tag/ R tag

- Using J tag and R tag allows you to call up the mark screen to the base screen and display it.
Designate the place to which the mark screen is called up using R tag and designate which designated point the mark screen is called up to for display (the rail position for the display of the mark screen) using J tag.

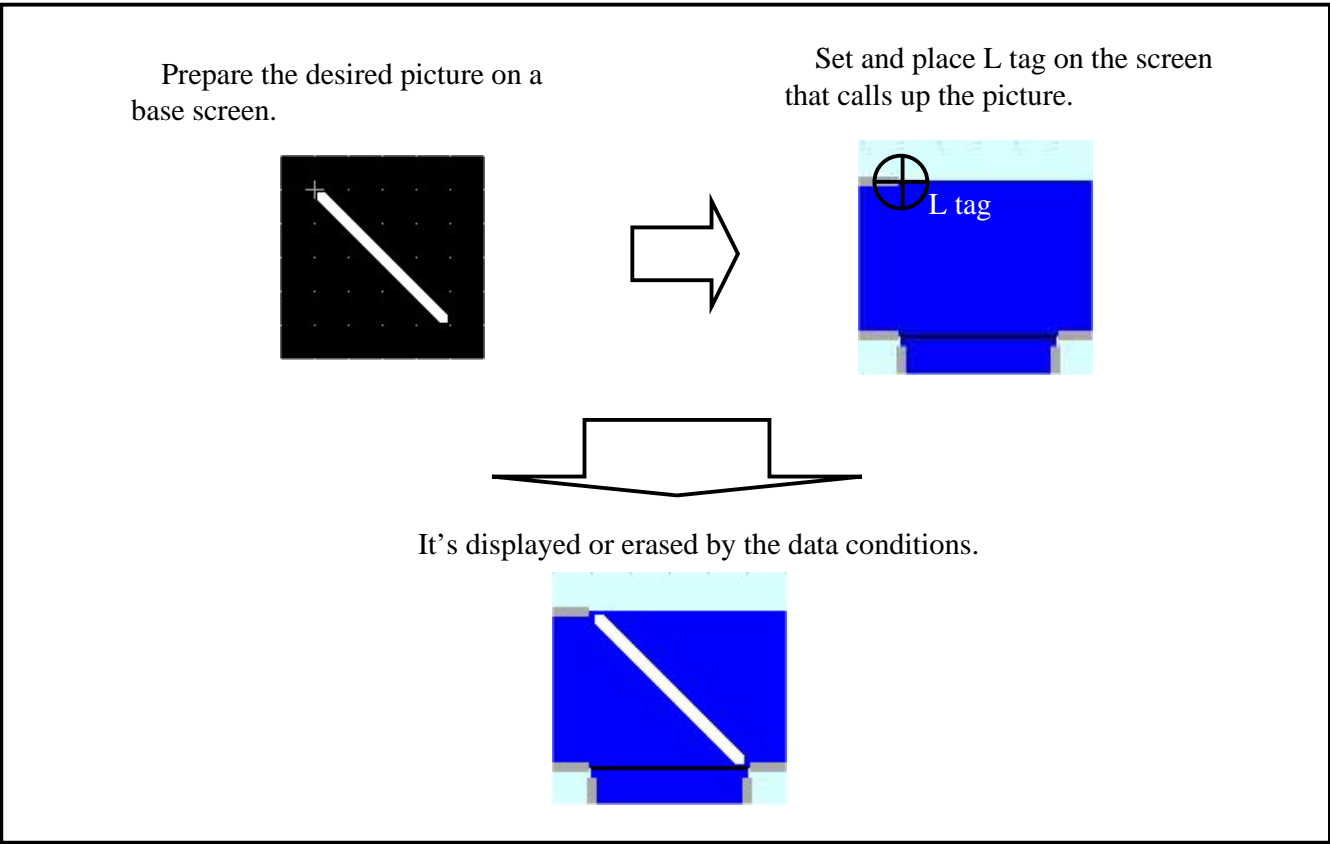


★ Point

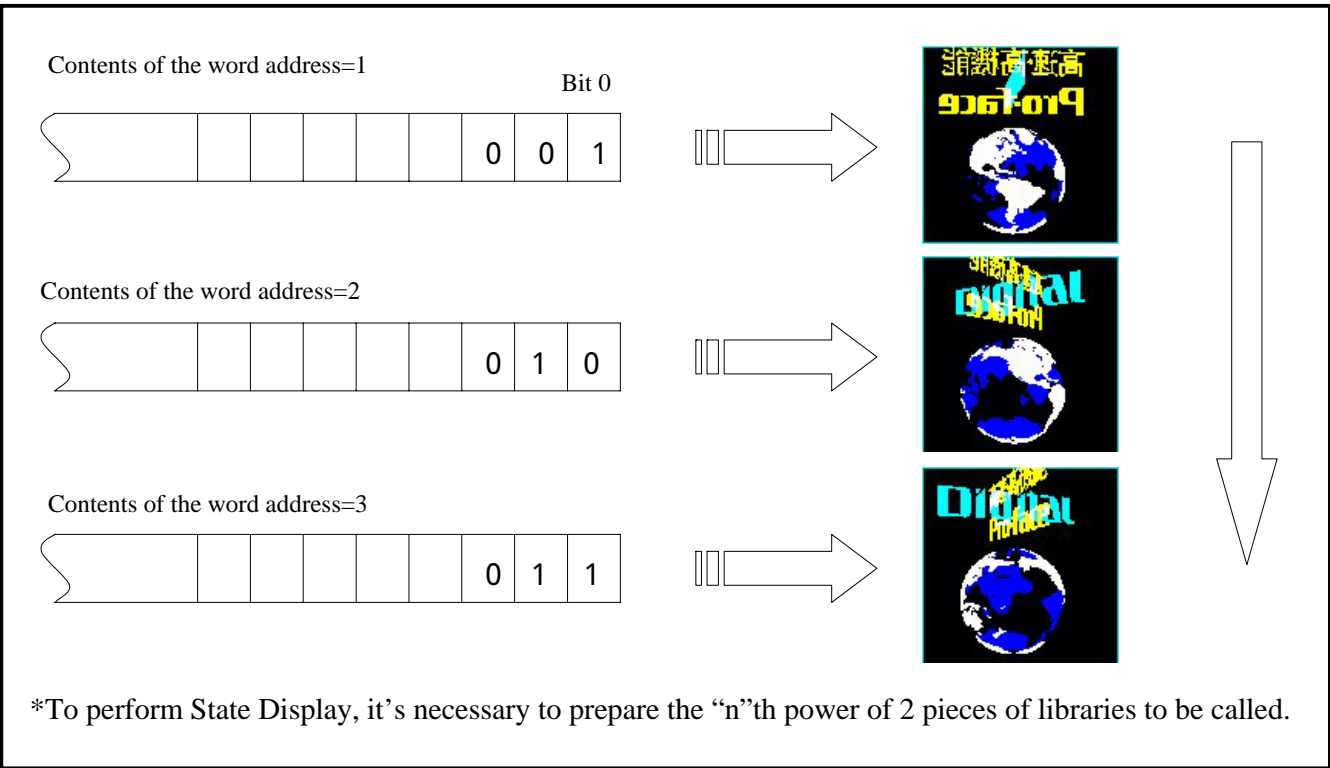
some tags can complete their action in conjunction with each other like J tag and R tag.

2. Action of L tag (Direct/Indirect)

- Placing L tag (Direct) enables you to call up the picture drawn on another screen to the L tag(Direct)-placed screen and display it or erase it.



- According to the changes of the plural bits in the word address, the library is changed and displayed. Changing it at high speed creates a smooth animation.

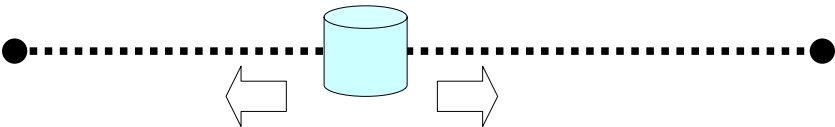


3. Action of F tag

- F tag calls up a picture (a library) to an optional position on the running screen.
The position is movable according to the changes of the data.
For F tag, there are the following settings; Move Between 2 Points and Area Move

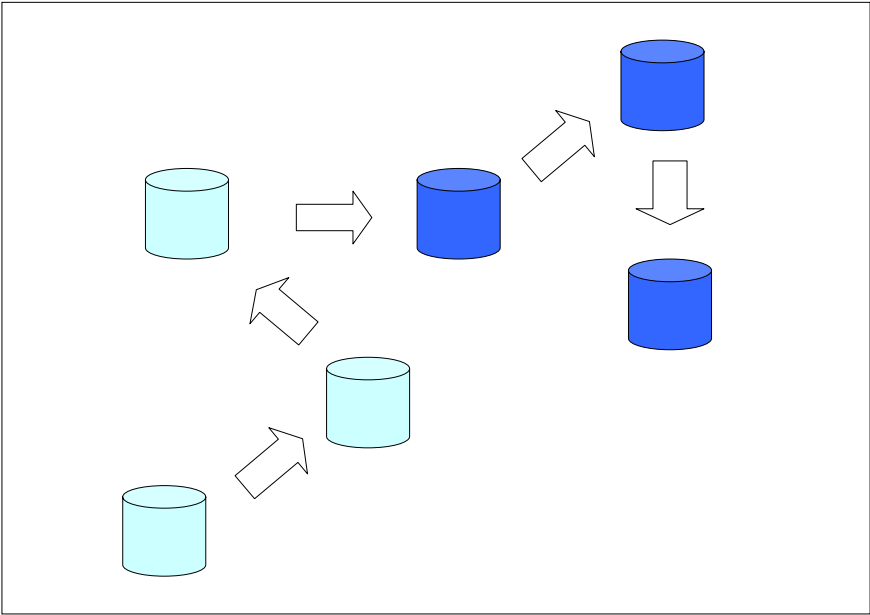
- **Move Between 2 Points**

Moves the library drawn on the base screen between 2 designated points.



- **Area Move**

Moves the library drawn on the base screen in the designated area.





Mark Display (J tag) and Rail Settings (R tag)

• Flow of Animation Settings

- 1

. Prepare the library to move on a mark screen.
- 2

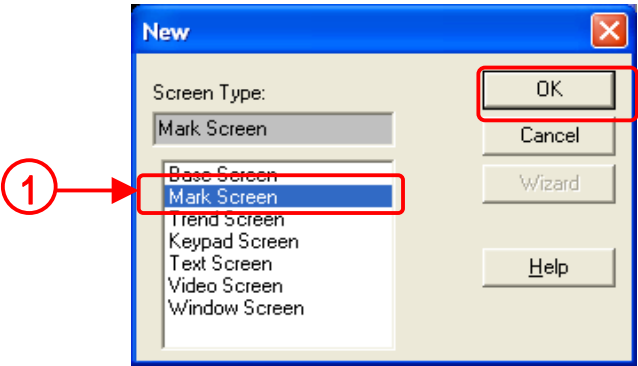
. Set the position to which the library is called up via R tag.
- 3

. Set J tag to call up the library.

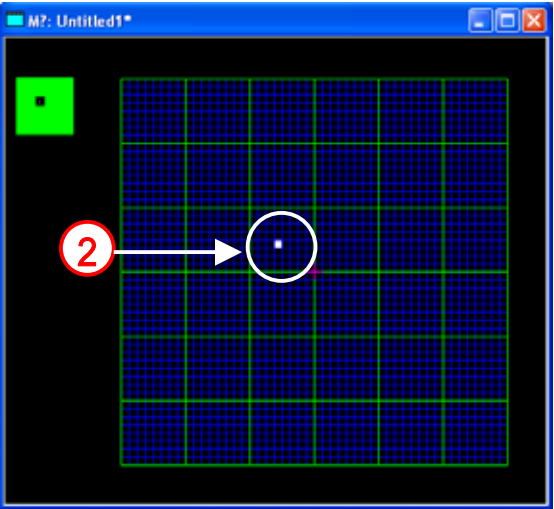
(1) Prepare the library to move via J tag.

- The library called up by J tag is the one created on a mark screen only. A mark screen is opened by selecting Mark Screen from Screen Type as a base screen is opened.

Select Mark Screen from New and click [OK].

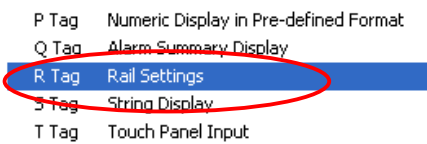


Draw a mark by dots.
In Mark Creation Area, if you click, a white point will appear and if double-click, it will become black. It's possible to draw with drag



(2) How to select R tag (Rail Settings)

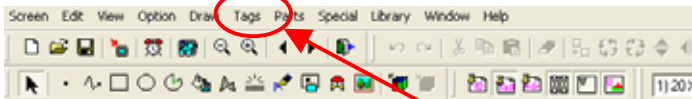
Select R tag from Tags on the menu bar.



Or click the [R tag] icon.



• Menu Bar



• Tag Tool Bar



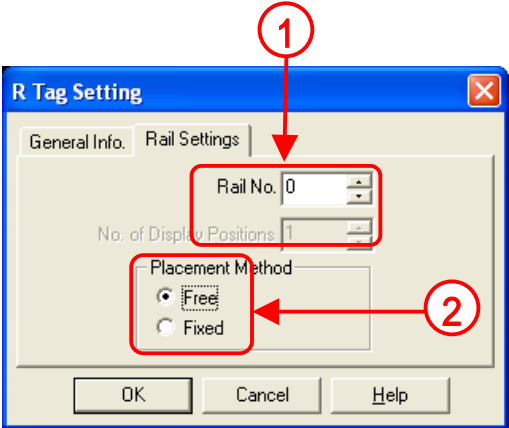
(3) Rail Settings

Rail No.: The number to relate with J tag. Set the same number as J tag that calls up a mark.

No. of Display Positions: Set here when Placement Method is Fixed. Set the No. of Display Positions for the moving mark in advance.

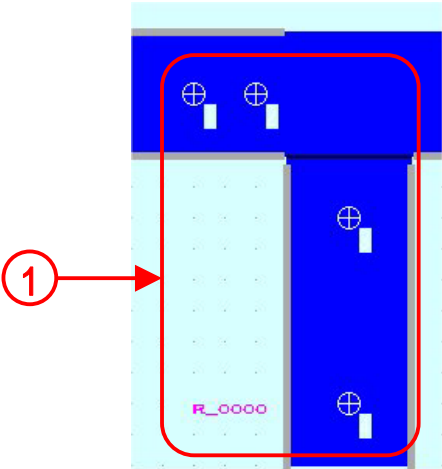
Free: It's possible to set up to 99 display positions on the screen freely.

Fixed: Only the number set in [No. of Display Positions] can be set for Display Positions. When [No. of Display Positions] is more than 1, you can choose to use the Line option, where R-tag positions are designated evenly between 2 points.(Start point/End point).



(4) R tag (Rail Settings) Placement

If you click [OK], display positions can be set. Click optional positions on the screen and set display positions.



(5) How to select Moving Mark Display (J tag)

- J tag displays a moving mark on the rail positions (setup using R tag).
The data stored in the word address decides the moving positions.

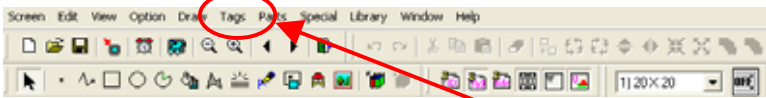
Select [J tag] from the [Tags] on the menu bar.



Or click the [J tag] icon.



• Menu Bar



• Tag Tool Bar



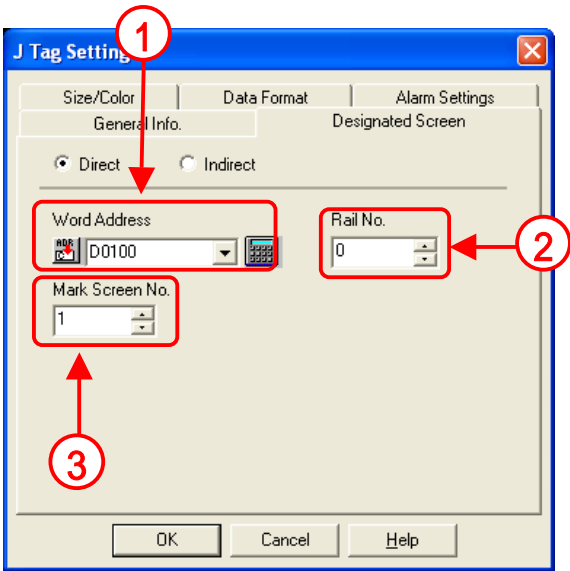
(6) Designated Screen (Direct) Settings

- The mark screen to call up is fixed.

Set the word address where the data of the display positions on the mark screen is stored.

Set the rail number of R tag that calls up the mark screen.

Set the screen number of the mark screen to call up.

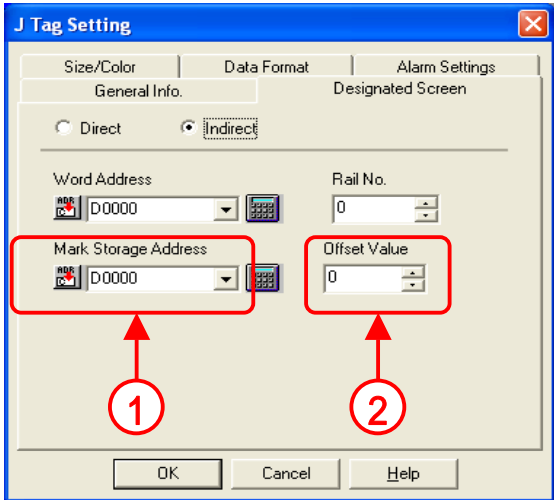


(7) Designated Screen (Indirect) Settings

- Storing the screen number to call up in the Mark Storage Address enables you to change the mark screen to call up.

Set the word address where the data of the display positions on the mark screen is stored.

Defines an offset value to be added to the Mark Word Address data. The picture of the total screen number is displayed.
When not using the Offset, enter a value of zero.





Let's perform Animation (J tag, R tag)

Using the sample screen, let's perform Animation.

Set actions of L tag and R tag that are placed on the sample screen and perform the animation display.

• Flow of Animation Settings

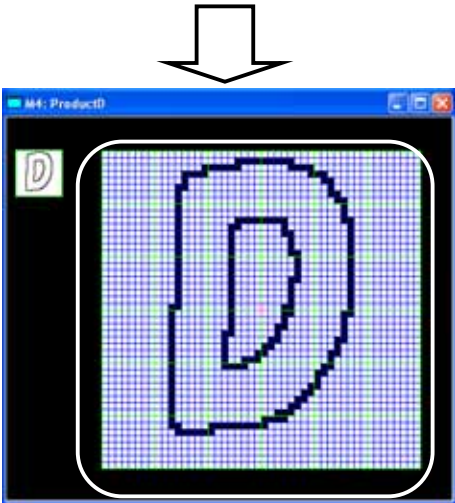
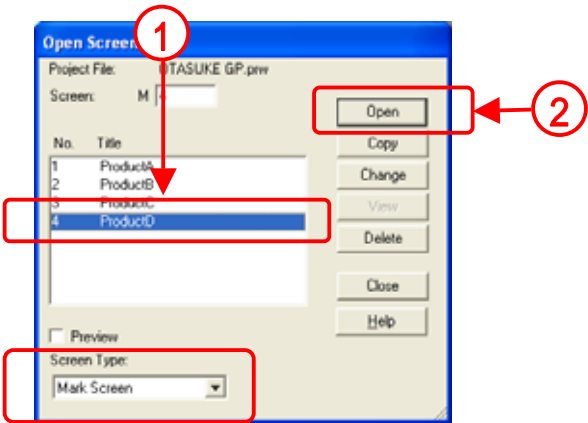
- 1 . Prepare the moving library on the mark screen, [M4].
- 2 . Open the base screen, [B12] and set the position to call up the library via R tag.
- 3 . Set J tag to call up the mark screen, [M4].

(1) Prepare the moving library.

• In this seminar, the library to display via L tag has been already prepared on the mark screen , [M4].

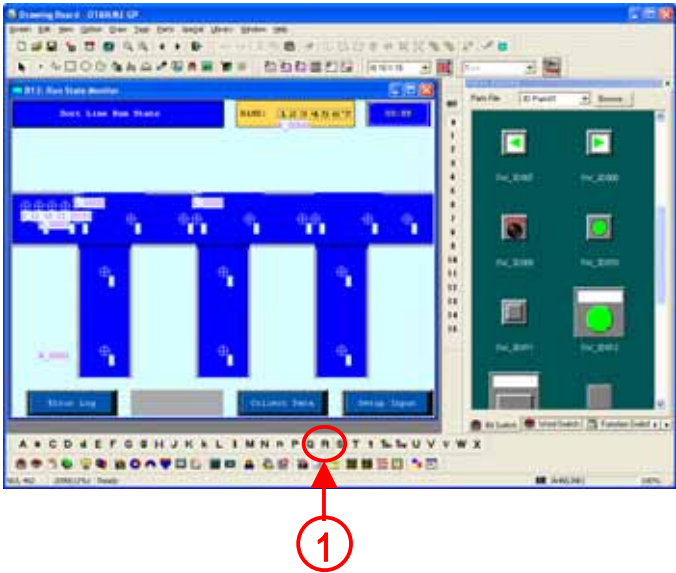
Select [Mark Screen] from [Screen Type].

Select [M4_ProductD].



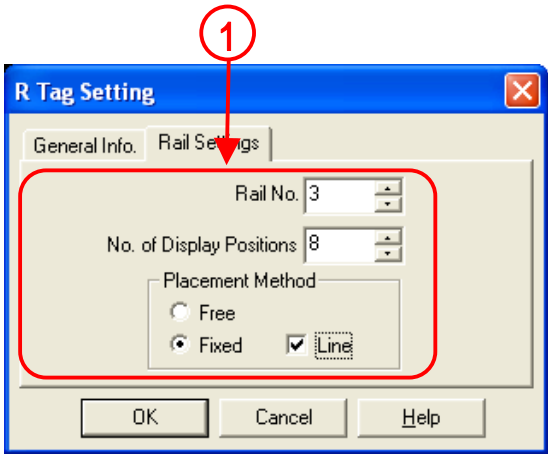
(2) Open R tag (Rail Settings) Setting.

Open B12, and Click the [R tag] icon from the tag tool bar.



(3) Place R tag (Rail Settings)

Open the [Rail Settings] tab and enter [3] for [Rail No.], select [Fixed] for [Placement Method], enter [8] for [No. of Display Positions], and check [Line].

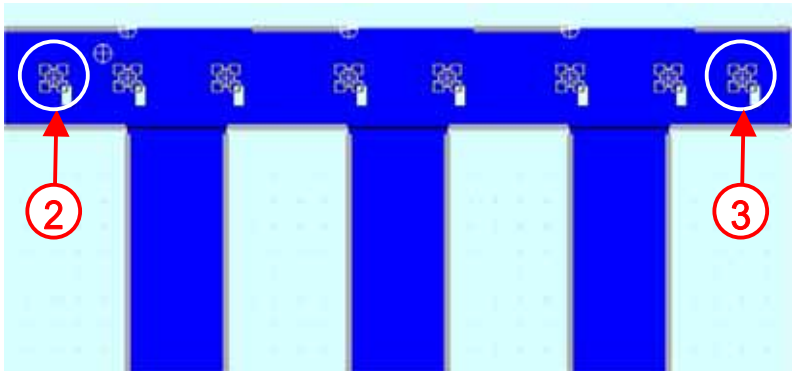


After completing all settings, click [OK] and click the start point of the display positions of the mark screen.



Next, click the end point.

The display positions of the mark screen are set evenly between the start point and the end one.

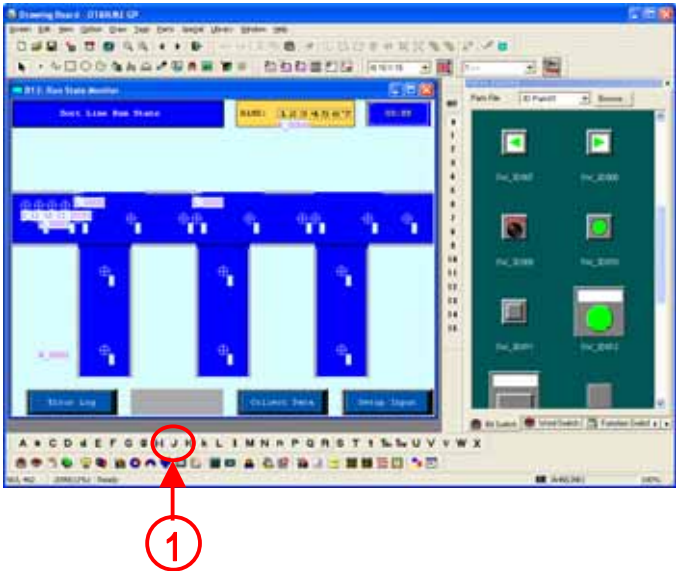


Point

Set the points on the rail so that they do not overlap when the marks appear actually.
The display might be incorrect.

(4) Open J tag (Moving Mark Display) Setting

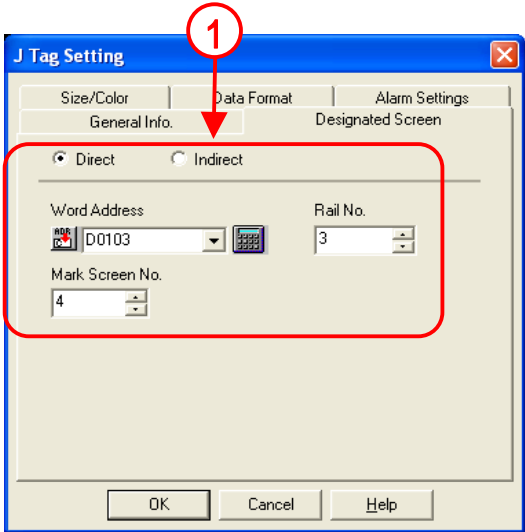
Click the [J tag] icon from the tag tool bar.



(5) Set Designated Screen.

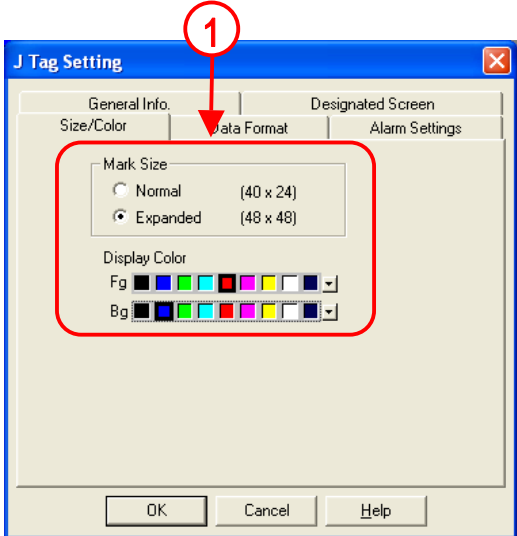
- Open [Designated Screen] and select [Direct].

Set [D0103] for [Word Address], [3] for [Rail No.], and [4] for [Screen No.].



(6) Set Size/Color.

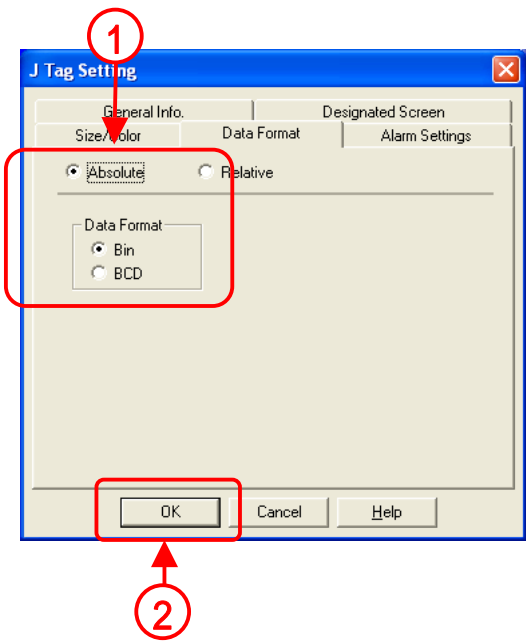
Open [Size/Color] and set [Expanded (48x48)] for [Mark Size] and [Fg: Red, Bg: Blue] for [Display Color].



(7) Set Data Format

Select [Absolute] and set [Bin] for [Data Format].

Click [OK] and place J tag on the screen.
(It'll be fine wherever J tag is placed.)





Library Display (L tag)

• Flow of Library Display Settings

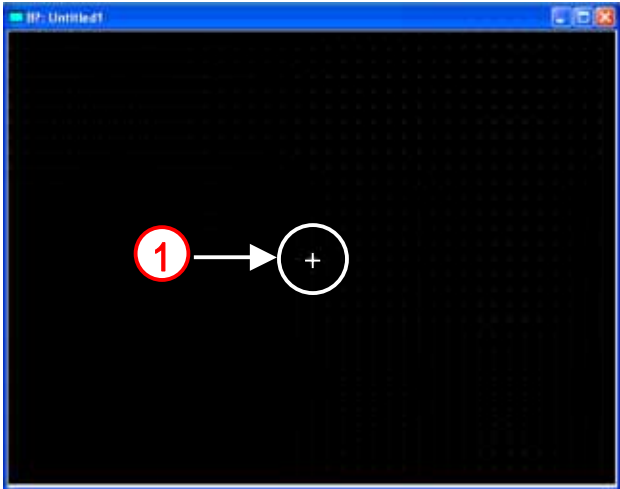
- 1 . Prepare the library to call up by L tag

2 . Set and place L tag on the screen that calls up the library.

(1) Prepare the library to display by L tag.

- When creating the library to call up by L tag on the base screen, there's a basis position to call up. The basis position is called up to the position designated by L tag like overlapping it.

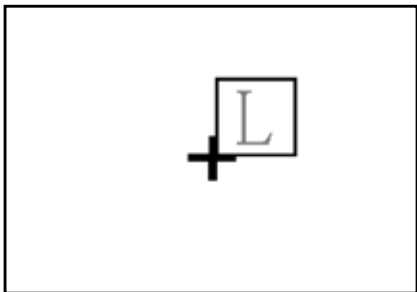
The center of the screen is the basis position of the library to call up and it's called up so that it overlaps L tag. If you draw a picture on the basis of the center point of the screen, the display position is easy to see when calling it up to L tag.



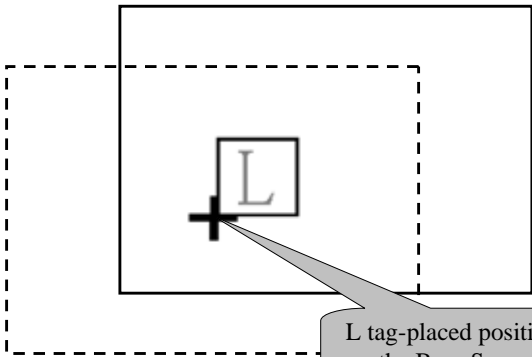
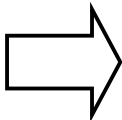
Point

Mechanism of Screen Display

- The center of the base screen where the original picture has been drawn becomes the L tag-placed position of the screen that calls it.



Original Picture Screen
(Ex.:Base Screen 100)

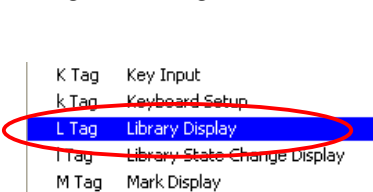


Screen at destination=L tag-placed screen
(Ex.:Base Screen 1)

(2) Selection of L tag (Library Display)

Select L tag from Tags on the menu bar.

• Menu Bar



Or click on the L tag icon.

• Tag Tool Bar



(3) Designated Screen (Direct) Settings

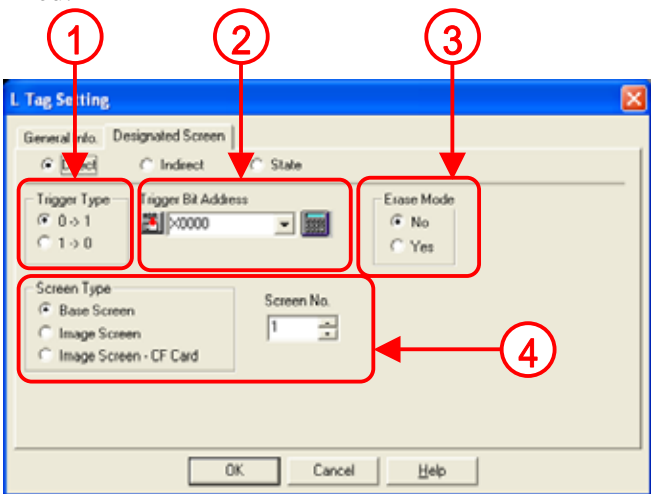
• If you select [Direct], the library to call up will be fixed.

Set the method to call up the library.

0 -> 1 : Trigger Bit Address OFF ON
Then, the library is displayed.

1 -> 0 : Trigger Bit Address ON OFF
Then, the library is displayed.

Set the Trigger Bit Address to call up the library.



No:The library displayed once remains to display without being erased.

Yes:The library is displayed or erased according to ON/OFF of the Trigger Bit.

Set Screen Type and Screen No. to display.

(4) Designated Screen (Indirect) Settings

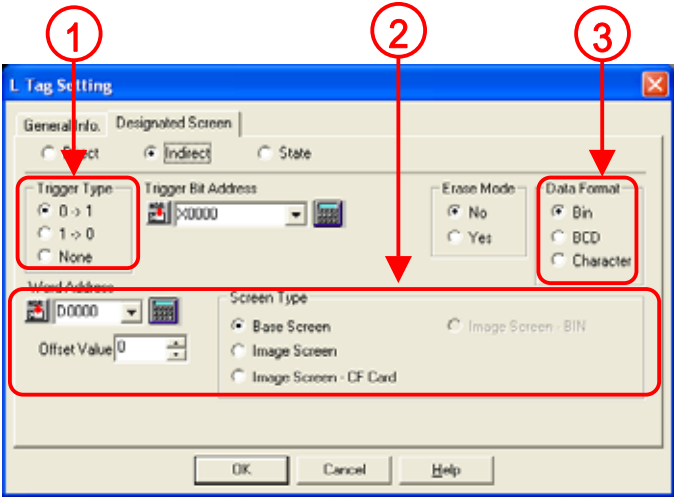
- Selecting [Indirect] enables you to change the library to call up by storing the screen No. to call up to the designated word address.

Set the method to call up the library.

Indirect: Don't set Trigger Bit.
Storing the screen No. to display into the word address causes the library to change.

Set the Screen Type and the word address where the screen No. is stored.
If you set Offset Value, the library of the screen number of the offset value + the data stored in the word address will be displayed.
When designating nothing, set [0].

Set the Data Format of the screen No. to store in the word address.





Point

Suggestions for the time when placing L tag

- 1 . Try not to use Fill for the library to call up. The line might disappear and the filling color might leak due to the screen display convenience.
 - 2 . When Yes is set for Erase Mode in L tag Settings, the color of the called library changes by overlapping the ground color.
- Ex.:Color combinations when using 8 color display



Display Bg	Black	Blue	Green	Cyan	Red	Magenta	Yellow	White
Black	Black	Blue	Green	Cyan	Red	Magenta	Yellow	White
Blue	Blue	Black	Cyan	Green	Magenta	Red	White	Yellow
Green	Green	Cyan	Black	Blue	Yellow	White	Red	Magenta
Cyan	Cyan	Green	Blue	Black	White	Yellow	Magenta	Red
Red	Red	Magenta	Yellow	White	Black	Blue	Green	Cyan
Magenta	Magenta	Red	White	Yellow	Blue	Black	Cyan	Green
Yellow	Yellow	White	Red	Magenta	Green	Cyan	Black	Blue
White	White	Yellow	Magenta	Red	Cyan	Green	Blue	Black



Let's perform Animation (L tag).

Using a sample screen, let's perform Animation.

The change of the unit is expressed by overlapping 2 L tags.
ON/OFF of the same bit seen, the display of the library of ON/the one of OFF is changed.

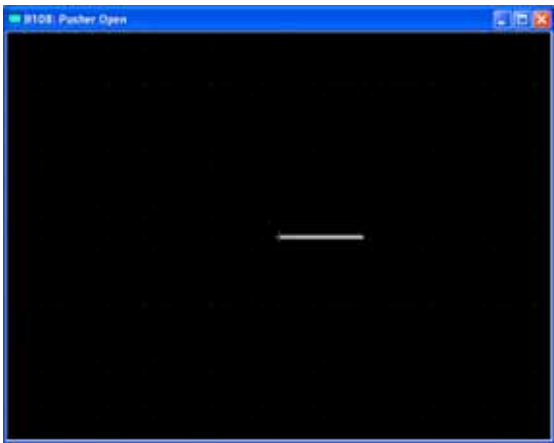
• Flow of Animation Settings

- 1 . Prepare the library to call up by L tag on [B108, 109].

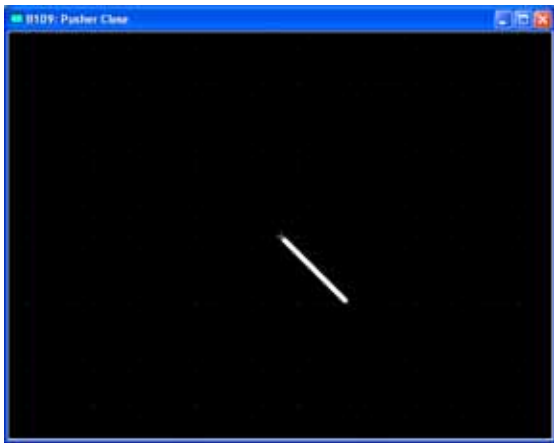
2 . Open [B12] and set/place L tag.

(1) Prepare the library to display.

- In this seminar, the library to display via L tag has been already prepared in the base screens, B108, B 109.



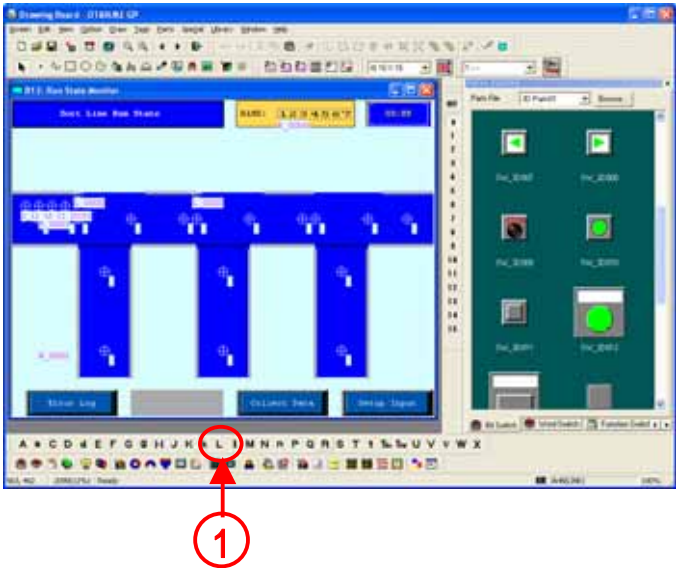
The library when the bit is OFF (B108)



The library when the bit is ON (B109)

(2) Open L tag Settings

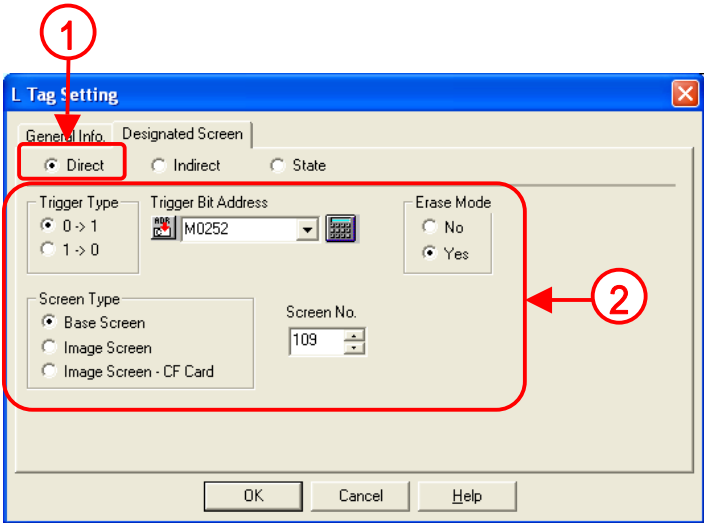
Open B12,and Click the [L tag] icon from the tag tool bar.



(3) Set Designated Screen. (the library when the bit is ON)

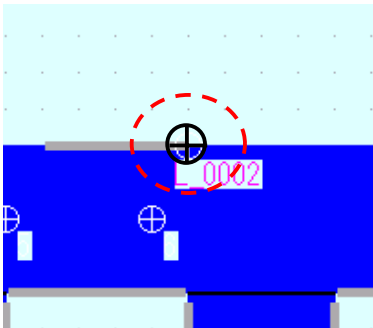
Select [Direct] for [Designated Screen].

- [Trigger Type]:[0 -> 1]
 - [Trigger Bit Address]:[M252]
 - [Erase Mode]:[Yes]
 - [Screen Type]:[Base Screen]
 - [Screen No.]:[109]
- Set the above.



(4) Place L tag.

After completing all settings, click [OK] and place L tag on the position shown below.



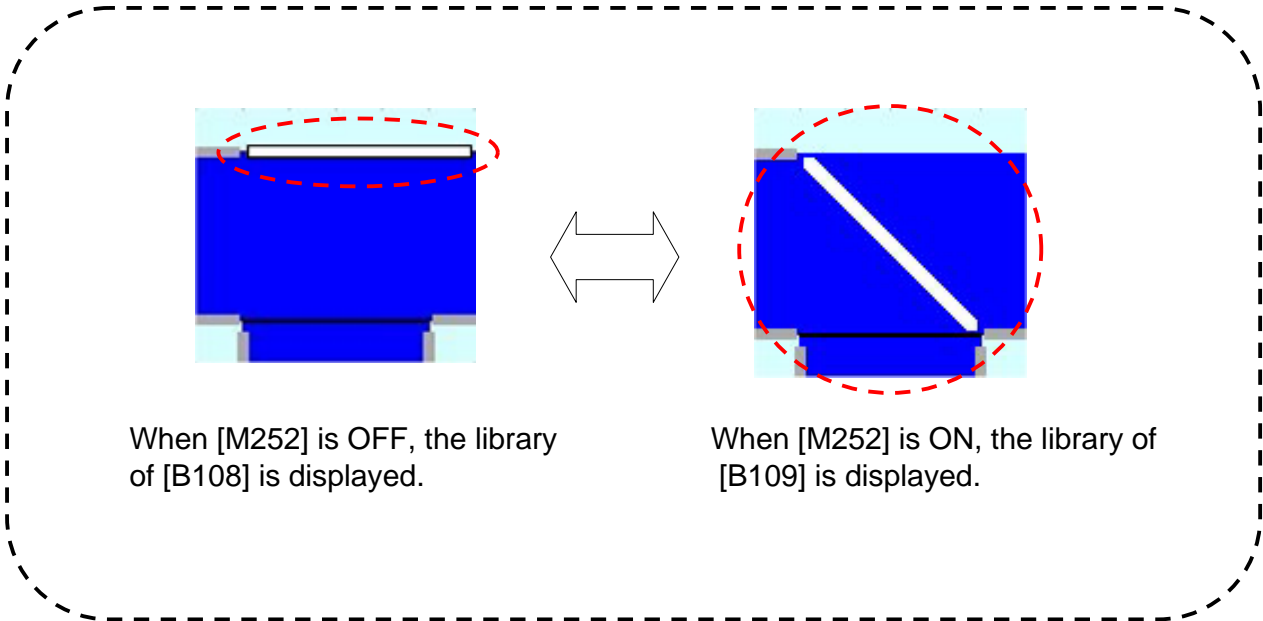
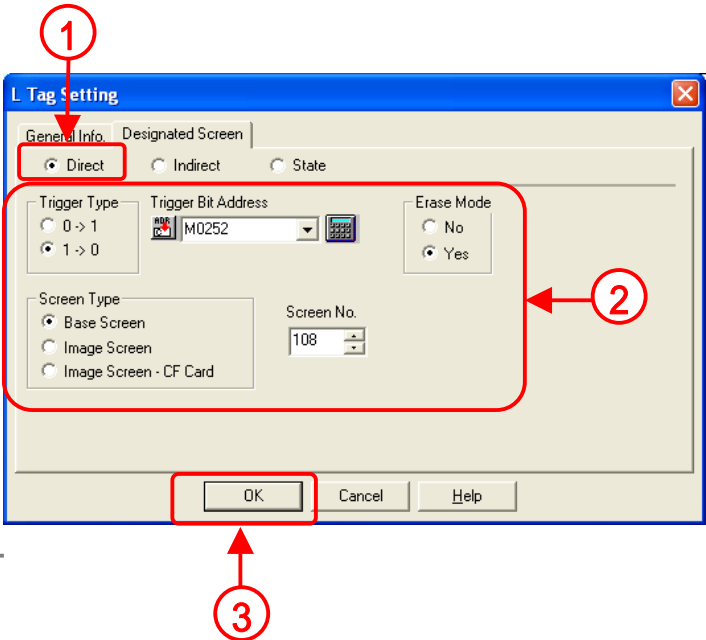
(5) Set Designated Screen. (the library when the bit is OFF)

- Open a new L tag.

Select [Direct] for Designated Screen.

[Trigger Type]:[1->0]
[Trigger Bit Address]:[M252]
[Erase Mode]:[Yes]
[Screen Type]:[Base Screen]
[Screen No.]:[108]
Set the above.

After completing all settings, click [OK] and place the new L tag on the same position as the former L tag has been placed.



• **Flow of State Display Setting**

- 1 . Prepare plural libraries to call up and display via L tag.

2 . Set and place the L tag on the screen to which the libraries are called up.

(1) Prepare plural libraries to change and display via L tag.

On the library to change and display via State Function, please place the same background color (Fill Square) as the base screen on which the L tag has been placed.

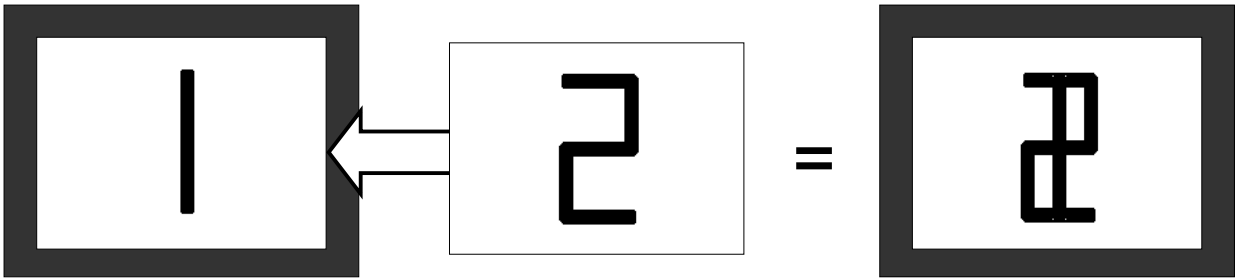
When there's no Fill Square of BG, the new library is called up overlapping with the previously displayed library and therefore the display becomes incorrect.

When creating a library to call up on the base screen, it is called up so that the center of the base screen overlaps with the position where the L tag has been placed.



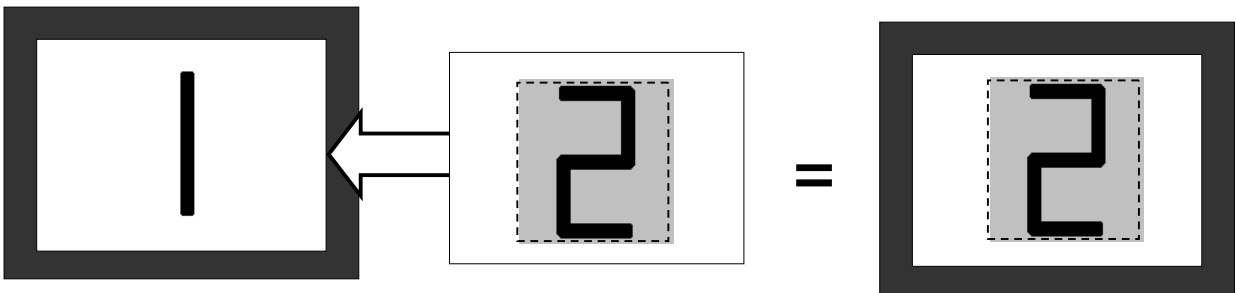
When no background has been prepared on the library to call up,

- If [2] is called up to the screen where [1] is displayed, the [1] and the [2] overlap with each other and are displayed.



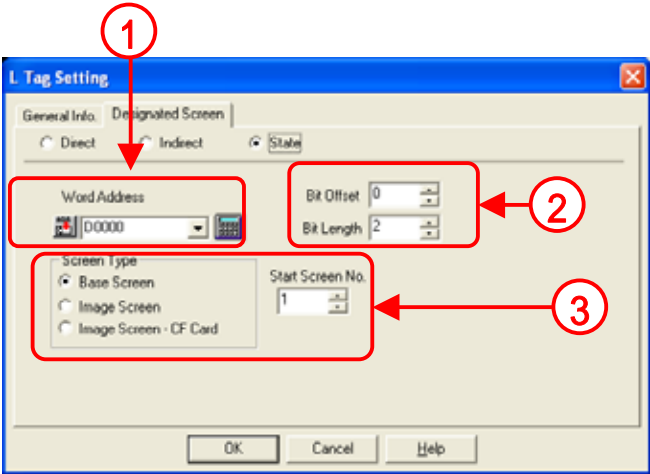
When a background has been prepared on the library to call up,

- If [2] is called up to the screen where [1] is displayed, the [1] is written over and the only [2] is displayed.



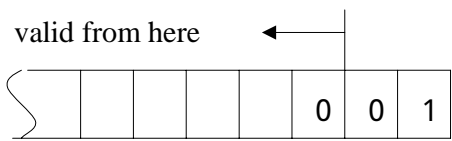
(2) Data Format Settings

According to the bit change of the data stored in the word address setup here, the screens are changed and displayed.



Bit Offset: Define the bits, from which position in the Word Address, are used as the state trigger bits.

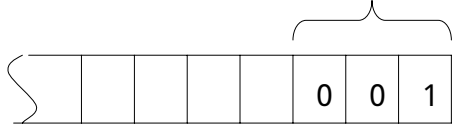
Ex: Offset = 2



Bit Length: Set the bit length to use for changing screens. The number of libraries to change is determined depending on a bit length.

Ex: Bit Length = 3

The No. of the necessary screens is [Cube of 2=8 (pieces)].



Screen Type: Set the screen type to display.

Start Screen No.: Set the start screen number of the screen to display.

Ex: When you set [Word Address: D100], [Bit Offset: 3], [Bit Length: 2], [Screen Type: Base Screen], and [Start Screen No.: 10],

• Data stored in D100

...	0	0	0	0	0	0	0	: B10 is displayed.
...	0	0	1	0	0	0	0	: B11 is displayed.
...	0	1	0	0	0	0	0	: B12 is displayed.
...	0	1	1	0	0	0	0	: B13 is displayed.



Free Library Display (F tag)

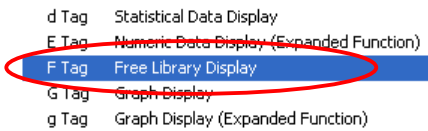
• Flow of Animation Setting

- 1 . Prepare the moving library via F tag.

2 . Set and place F tag on the screen where the library moves.

(1) How to select F tag (Free Library Display)

Select [F tag] from the [Tags] on the menu bar.



Or click the [F tag] icon.



• Menu Bar



• Tag Tool Bar

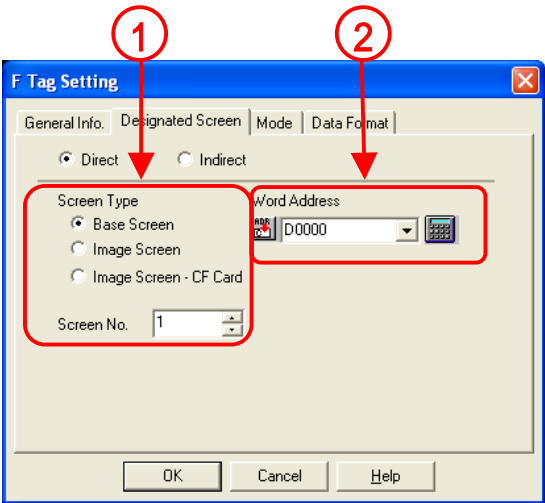


(2) Designated Screen (Direct) Settings

- If you select [Direct], the library to call up will be fixed.

Set the screen type and the screen No. to display.

Store the data of the display positions.



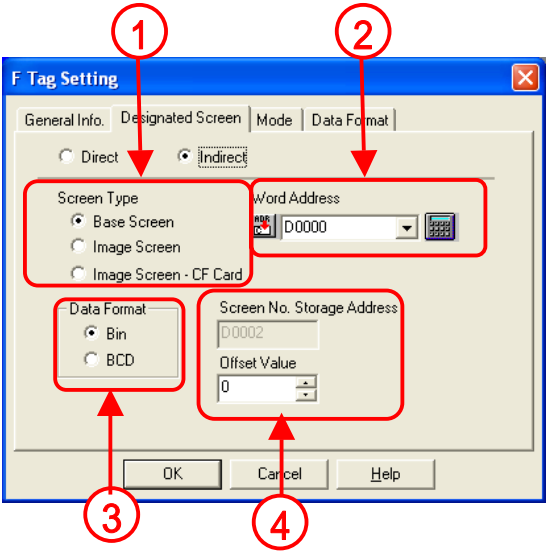
(3) Designated Screen (Indirect) Settings

- Selecting [Indirect] enables you to change the library to call up by storing the screen No. to call up to the designated word address.

Set the screen type and the screen No. to display.

Store the data of the display positions.

Set the data format of the screen No. that is stored in the Screen No. Storage Address.



Screen No. Storage Address: Defines the word address containing the screen number.

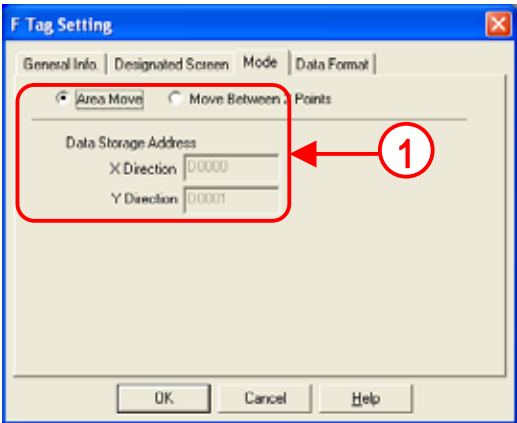
Offset Value: Defines an offset value to be added to the Mark Word Address data. The picture of the total screen number is displayed.
When not using the Offset, enter a value of zero.

(4) Mode Settings

Area Movement:Designates each movement from each start point of X/Y directions and moves the screen to optional positions.

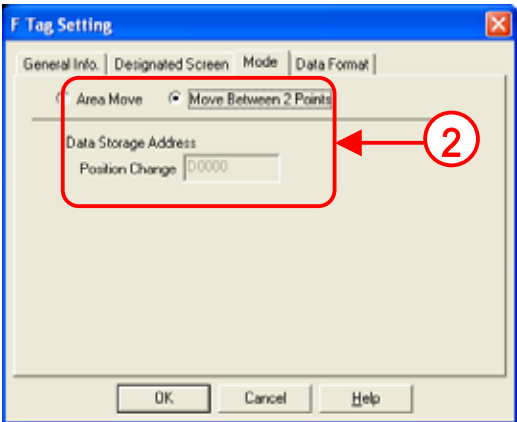
(Note:The origin is upper left.)

+ 0 :	X-coordinate data
+ 1 :	Y-coordinate data



Two Point Movement: Designates movement from the start point and moves the screen on the line between 2 points.

+ 0 :	Movement data
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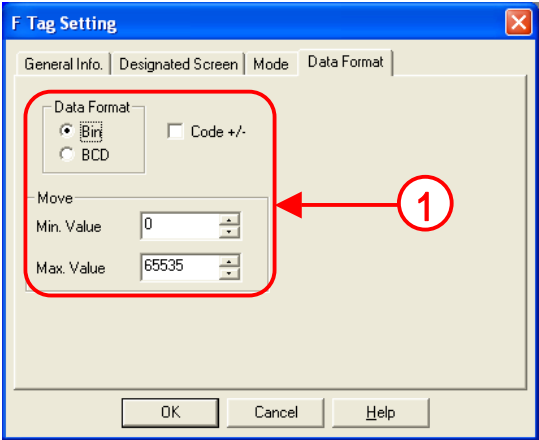


(5) Data Format Settings

Data Format:Set the data format to the data to store in the word address.

Move:Set the range of the movement data.
According to the setup range, the data is converted and displayed.

• [Mode -> Move Between 2 Points]



• [Mode] -> [Area Move]

X Range/Y Range:Set the range of the movement data for X/Y directions. According to the setup range, the data is converted and displayed.

